

## **REMARKS**

Claims 34, 35, 47 and 48 are pending in this application. Claims 34 and 47 are independent. Claims 1-33, 36-46, 49 and 50 have been canceled.

Claim 35 is objected to under 35 U.S.C. 1.75(c) as failing to further limit base claim 34. Claim 35 has been amended such that it recites a further limitation with respect to claim 34, thereby obviating the objection.

### **Rejection Under 35 U.S.C. 103(a)**

The Office Action rejects claims 34, 35, 47 and 48 under 35 U.S.C. 103(a) as being unpatentable over Kotler et al. U.S. Patent No. 6,504,898 (“Kotler”) in view of Bergeret et al. U.S. Patent No. 4,852,138 (“Bergeret”).

The present invention provides a system and method of irradiating an article from two opposing sides with an amount of radiation between lower and upper limits. In order to ensure sufficient sterilization of the article, the cumulative radiation should be between the lower and upper limits at all positions in the article. When it is determined that the amount of radiation will exceed the upper limit, the intensity of the radiation directed to the article is reduced such that the upper limit is not exceeded. Although the Kotler reference discloses a lower limit for the radiation dose, it clearly fails to disclose an upper limit for the radiation dose. (Col. 4, lines 8-10).

Independent claims 34 and 47 recite a system and method, respectfully, for irradiating an article using a pair of radiation sources disposed on opposite sides of the article. On the other hand, Kotler teaches a product irradiator, wherein the product is “rotated on a turntable” during

irradiation. Claim 34 further recites the step of “reducing the intensity of the radiation directed to the article, when it is determined that the cumulative amount of radiation will be above the second limit, so that the reduced amount of radiation directed to the article will be between the first limit and the second limit”. This step involves using a microprocessor to determine the intensity of the radiation to be applied to the article, and then *reducing the intensity of the radiation before it is applied to the article if the amount of radiation is above the second limit.* (Emphasis added).

Kotler teaches that the product is irradiated “for a period of time sufficient to achieve a **minimum** required radiation dose within the product”. (Col. 4, lines 8-10). However, Kotler fails to disclose the use of a **maximum** desirable cumulative radiation dose that represents a predetermined upper limit to the cumulative amount of allowable radiation. Moreover, Kotler does not provide for *reducing the intensity of the radiation* before it is applied to the product. The Office Action points to Kotler column 1, lines 20-25; column 4, lines 1-15 and 40-50; column 7, lines 25-35; column 8, lines 14-47; column 9, lines 25-60; and column 12, lines 60-68, as providing a teaching for “reducing the intensity of the radiation directed to the article, when it is determined that the cumulative amount of radiation will be above the second limit, so that the reduced amount of cumulative radiation directed to the article will be between the first limit and the second limit”. Applicants respectfully disagree. The cited paragraphs in Kotler simply do not teach reducing the radiation intensity once an upper limit has been exceeded.

In view of the above, Kotler clearly does not teach the step of “*reducing the intensity of the radiation directed to the article, when it is determined that the cumulative amount of radiation will be above the second limit, so that the reduced amount of cumulative radiation*

*directed to the article will be between the first limit and the second limit.”* To the contrary, Kotler is only concerned with increasing the intensity of the radiation to achieve a minimum required radiation dose within the product.

Claim 47 recites a system for irradiating an article, including: (1) a pair of radiation sources disposed on opposite sides of the article for irradiating the article; (2) a microprocessor for determining whether the intensity of a cumulative amount of radiation will be between a first limit and a second limit; and (3) a member for reducing the intensity of the cumulative amount of radiation to a value between the first limit and the second limit when the microprocessor determines that the intensity of the radiation of the article will be greater than the second limit. The microprocessor is employed to determine the intensity of the cumulative amount of radiation before it is applied to the article. Then, if the amount of radiation is above the second limit, the member is used to reduce the intensity of the radiation.

As discussed hereinabove with respect to claim 34, Kotler provides a product irradiator for optimizing dose uniformity in a product, wherein the product is irradiated “for a period of time sufficient to achieve a minimum required radiation dose within the product”. (Col. 4, lines 8-10). Kotler fails to disclose the use of a predetermined upper limit to the amount of allowable cumulative radiation applied to the product. Further, Kotler does not provide for reducing the intensity of the radiation before it is applied to the product. Kotler thus does not teach a *member for reducing the intensity of the cumulative amount of radiation to a value between the first limit and the second limit when a microprocessor determines that the intensity of the radiation of the article will be greater than the predetermined upper limit*. As discussed hereinabove, Kotler is

merely concerned with increasing the intensity of the radiation to achieve a minimum required radiation dose within the product, and is silent as to a maximum radiation dose.

In view of the above, Applicants respectfully request withdrawal of the rejection of claims 34, 35, 47 and 48 as being unpatentable over Kotler in view of Bergeret under 35 U.S.C. 103(a).

**Conclusion**

It is believed this amendment now has placed the application in condition for consideration and allowance. If necessary, the Commissioner is hereby authorized in this and concurrent replies to charge payment (or credit any overpayment) to Deposit Account No. 50-0683 of Luce, Forward, Hamilton & Scripps.

Respectfully submitted,

Date

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